

What is Claimed is:

*Sub A1*

1 1. An inverter, comprising:  
2 a transformer;  
3 a first switch transistor with one of the source/drain thereof  
4 electrically coupled to the primary side of said transformer;  
5 a second switch transistor with one of the source/drain thereof  
6 electrically coupled to the primary side of said transformer;  
7 a reset capacitor electrically coupled between the other of the  
8 source/drain of said first switch transistor and the other of the  
9 source/drain of said second switch transistor; and  
10 a control circuit for generating two switch control signals in  
11 response to a voltage feedback signal representing the current value  
12 at the secondary side of said transformer and respectively outputting  
13 to the gate of said first switch transistor and the gate of said second  
14 switch transistor to thereby cause said first switch transistor and  
15 said second switch transistor not to conduct current at the same time.

1 2. The inverter of claim 1, further comprising:  
2 a first snubber capacitor electrically coupled between the source  
3 and the drain of said first switch transistor; and  
4 a second snubber capacitor electrically coupled between the source  
5 and the drain of said second switch transistor.

1 3. The inverter of claim 1, further comprising a decoupling  
2 capacitor electrically coupled to the secondary side of said  
3 transformer.

1 4. The inverter of claim 1, wherein said control circuit comprises  
2 a driving circuit which utilizes the voltage across said reset capacitor  
3 as driving power for generating said two switch control signals.

1 5. The inverter of claim 1, wherein said control circuit comprises:  
2 an error amplifier, for sensing said voltage feedback signal  
3 representing the current value at the secondary side of said transformer

4 and a reference voltage to perform an error amplification; and  
5 a pair of comparators for generating said two switch control signals  
6 according to the comparison result of the output of said error amplifier  
7 and a reference triangular wave.

1 6. The inverter of claim 5, wherein said control circuit further  
2 comprises a driving circuit for enhancing the driving power of said  
3 two switch control signals.

1 7. The inverter of claim 5, wherein said control circuit further  
2 controls the current value at the secondary side of said transformer  
3 according to a burst mode control signal received by said error amplifier.

1 8. The inverter of claim 5, wherein said pair of comparators  
2 comprise:

3 a voltage-dividing resistor electrically coupled to the output  
4 terminal of said error amplifier for providing two outputs with different  
5 voltages;

6 a first comparator electrically coupled to one of the two outputs  
7 of said voltage-dividing resistor for generating one of said two switch  
8 control signals; and

9 a second comparator electrically coupled to the other of the two  
10 outputs of said voltage-dividing resistor for generating the other  
11 of said two switch control signals.

1 9. The inverter of claim 1, wherein said control circuit further  
2 controls the current value at the secondary side of said transformer  
3 according to a burst mode control signal.

1 10. The inverter of claim 1, wherein said control circuit further  
2 renders both said first and said second switch transistors  
3 non-conducting during the interval between the conducting of said first  
4 switch transistor and the conducting of said second switch transistor.

1 11. A lamp ignition system, comprising:  
2 a discharge lamp; and

3 an inverter;

4 wherein said inverter comprising:

5 a transformer with the secondary side thereof electrically coupled  
6 to said discharge lamp;

7 a first switch transistor with one of the source/drain thereof  
8 electrically coupled to the primary side of said transformer;

9 a second switch transistor with one of the source/drain thereof  
10 electrically coupled to the primary side of said transformer;

11 a reset capacitor electrically coupled between the other of the  
12 source/drain of said first switch transistor and the other of the  
13 source/drain of said second switch transistor; and

14 a control circuit for generating two switch control signals in  
15 response to a voltage feedback signal representing the current value  
16 at the secondary side of said transformer and respectively outputting  
17 to the gate of said first switch transistor and the gate of said second  
18 switch transistor to thereby cause said first switch transistor and  
19 said second switch transistor not to conduct current at the same time.

1 12. The lamp ignition system of claim 11, wherein said inverter  
2 further comprises:

3 a first snubber capacitor electrically coupled between the source  
4 and the drain of said first switch transistor; and

5 a second snubber capacitor electrically coupled between the source  
6 and the drain of said second switch transistor.

1 13. The lamp ignition system of claim 11, wherein said inverter  
2 further comprises a decoupling capacitor electrically coupled between  
3 the secondary side of said transformer and said discharge lamp.

1 14. The lamp ignition system of claim 11, wherein said control  
2 circuit comprises a driving circuit which utilizes the voltage across  
3 said reset capacitor as driving power for generating said two switch  
4 control signals.

1 15. The lamp ignition system of claim 11, wherein said control  
2 circuit comprises:

3 an error amplifier for sensing said voltage feedback signal  
4 representing the current value through said discharge and a reference  
5 voltage to perform an error amplification; and

6 a pair of comparators for generating said two switch control signals  
7 according to the comparison result of the output of said error amplifier  
8 and a reference triangular wave.

1 16. The lamp ignition system of claim 15, wherein said control  
2 circuit further comprises a driving circuit for enhancing the driving  
3 power of said two switch control signals.

1 17. The lamp ignition system of claim 15, wherein said control  
2 circuit further controls the current value through said discharge lamp  
3 according to a burst mode control signal received by said error amplifier.

1 18. The lamp ignition system of claim 11, wherein said control  
2 circuit further controls the current value through said discharge lamp  
3 according to a burst mode control signal.

1 19. An inverter, comprising:

2 a transformer;

3 a first switch transistor with one of the source/drain thereof  
4 electrically coupled to the primary side of said transformer;

5 a second switch transistor with one of the source/drain thereof  
6 electrically coupled to the primary side of said transformer;

7 a reset capacitor electrically coupled between the other of the  
8 source/drain of said first switch transistor and the other of the  
9 source/drain of said second switch transistor; and

10 a control circuit for controlling said first switch transistor  
11 and said second switch transistor not to conduct current at the same  
12 time.

1 20. The inverter of claim 19, wherein said control circuit comprises

A1  
2 a driving circuit which utilizes the voltage across said reset capacitor  
3 as driving power for generating said two switch control signals  
4 respectively output to said first switch transistor and said second  
5 switch transistor so as to reduce the conducting resistance thereof.

1 21. The inverter of claim 19, wherein said control circuit further  
2 renders both said first and said second switch transistors  
3 non-conducting during the interval between the conducting of said first  
4 switch transistor and the conducting of said second switch transistor.

1 22. The inverter of claim 19, further comprising:  
2 a first snubber capacitor electrically coupled between the source  
3 and the drain of said first switch transistor; and  
4 a second snubber capacitor electrically coupled between the source  
5 and the drain of said second switch transistor.